Amendment to the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently amended) A method for forming a vertical ferrocapacitor comprising:

depositing a ferroelectric material on an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in the ferroelectric material;

depositing an electrode layer [[into]] on the openings ~~formed~~ in the ferroelectric material;

a second etching step, after depositing the electrode layer, of etching to form gaps in the electrode layer and the insulating layer at the bottom of the openings; and

inserting conductive material into the gaps at least on a portion of the electrode layer.

2. (Previously presented) A method according to claim 1 in which the first etching step leaves a film of ferroelectric material remaining at the bottom of the openings, and the film of ferroelectric material is removed during the second etching step.

3. (Previously presented) A method according to claim 1 further comprising planarizing to form a flat upper surface on the ferroelectric material and depositing an insulating layer over it, after inserting the conductive material.

4. (Previously presented) A method according to claim 3 in which the conductive material substantially fills the openings at least up to the planarization level.

5. (Withdrawn) A ferroelectric capacitor produced by a method according to claim 1.

6. (Withdrawn) A FeRAM device including a ferrocapacitor produced by a method according to claim 1.

7. (Cancelled).

8. (Previously presented) A method according to claim 1 wherein the electrode layer has a thickness in the range of 15nm to 20 nm.

9. (Previously presented) A method according to claim 1 wherein the insulating layer is Al_2O_3.

10. (Previously presented) A method according to claim 1 wherein the ferroelectric material is PZT.

11. (Previously presented) A method according to claim 1 wherein the electrode layer contains iridium.

12. (Previously presented) A method according to claim 1 wherein the conductive material contains iridium.

13. (Previously presented) A method for forming a ferrocapacitor includes the steps of:

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in the ferroelectric material, but leaving a film of ferroelectric material remaining at the bottom of the openings;

depositing an electrode layer into the openings formed in the ferroelectric material;

a second etching step, after depositing the electrode layer, of etching the film of the ferroelectric material and the insulating layer at the bottom of the openings to form gaps; and

inserting conductive material into the gaps.

14. (Previously presented) A method for forming a vertical ferrocapacitor comprising:

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in the ferroelectric material;

depositing an electrode layer into the openings formed in the ferroelectric material;

a second etching step, after depositing the electrode layer, of etching to form gaps in the electrode layer and the insulating layer at the bottom of the openings;

inserting conductive material into the gaps; and

planarizing to form a flat upper surface on the ferroelectric material and depositing an insulating layer over the upper surface, after inserting the conductive material.

15. (Previously presented) A method according to claim 14 in which the conductive material substantially fills the openings at least up to the planarization level.

16. (Previously presented) A method for forming a vertical ferrocapacitor comprising:

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in the ferroelectric material;

depositing an electrode layer into the openings formed in the ferroelectric material, the electrode layer has a thickness in the range of 15nm to 20 nm;

a second etching step, after depositing the electrode layer, of etching to remove the electrode layer and the insulating layer at the bottom of the openings; and

inserting conductive material into the gaps.

17. (Previously presented) A method for forming a vertical ferrocapacitor comprising:

depositing a ferroelectric material over an insulating layer, the insulating layer is Al_2O_3;

a first etching step of etching of the ferroelectric material to form openings in the ferroelectric material;

depositing an electrode layer into the openings formed in the ferroelectric material;

a second etching step, after depositing the electrode layer, of etching to create gaps in the electrode layer and the insulating layer at the bottom of the openings; and

inserting conductive material into the gaps.

18. (Previously presented) A method for forming a vertical ferrocapacitor comprising:

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in the ferroelectric material;

depositing an electrode layer into the openings formed in the ferroelectric material, wherein the electrode layer contains iridium;

a second etching step, after depositing the electrode layer, of etching to create gaps in the electrode layer and the insulating layer at the bottom of the openings; and

inserting conductive material into the gaps.

19. (Previously presented) A method for forming a vertical ferrocapacitor comprising:

depositing a ferroelectric material over an insulating layer;

a first etching step of etching of the ferroelectric material to form openings in the ferroelectric material;

depositing an electrode layer into the openings formed in the ferroelectric material;

a second etching step, after depositing the electrode layer, of etching to create gaps in the electrode layer and the insulating layer at the bottom of the openings; and

inserting conductive material into the gaps, wherein the conductive material contains iridium.